

CLAIMS:

1. A phase detector, wherein at least one differential signal of two input signals (U_a ; U_b) may be formed over at least one predefined period by means of a first subtracter (12), at least one maximum value of the at least one differential signal may be detected by means of a first peak detector (16) and at least one minimum value of the at least one
5 differential signal may be detected by means of a second peak detector (18) and at least one further differential signal (U_{out}) may be formed from the at least one maximum value and the at least one minimum value by means of a second subtracter (14).
2. A phase detector as claimed in claim 1, characterized in that the phase detector
10 (100) is monolithically integrated.
3. A phase detector as claimed in any one of the preceding claims, characterized in that the phase detector (100) is integrated into a smart card.
- 15 4. A phase detector as claimed in any one of the preceding claims, characterized in that at least one of the signals (U_a ; U_b ; U_{out}) to be processed is an electrical, audible or visual signal or the like.
5. A phase detector as claimed in any one of the preceding claims, characterized
20 in that at least one of the signals (U_a ; U_b ; U_{out}) to be processed may substantially be described by a Fourier series.
6. A method of phase detection, wherein at least one differential signal of two input signals is formed over at least one predefined period, at least one maximum value and
25 at least one minimum value of the at least one differential signal is detected and at least one further differential signal is formed from the at least one maximum value and the at least one minimum value.

7. A method as claimed in claim 6, characterized in that the formation of at least one difference is effected by means of a subtracter (14).

8. A method as claimed in either one of claims 6 to 7, characterized in that
5 detection of the at least one maximum value and/or of the at least one minimum value is effected by means of a peak detector (16, 18).

9. A method as claimed in any one of claims 6 to 8, characterized in that at least one of the signals to be processed is an electrical, audible or visual signal or the like.

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10. A method as claimed in any one of claims 6 to 9, characterized in that at least one of the signals to be processed may substantially be described by a Fourier series.